

## Project No. 2

Coordinate System: NAD 1983 StatePlane  
Texas North Central FIPS 4202 Feet  
Projection: Lambert Conformal Conic

Texas Counties Hispanic  
Populatio\_2010 Percent  
of Total Population\_2010

### Legend

— HIGHWAYS

#### Texas Counties

##### Hispanic Population\_2010

- 3% - 11%
- 12% - 17%
- 18% - 22%
- 23% - 31%
- 32% - 44%
- 45% - 69%
- 70% - 96%

Course: GISC 2231  
Gis Tutorial 3 Advanced book  
ESRI Press 2011  
Data Source: US Census Bureau Web site

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## TEXAS COUNTIES

### Hispanic Population



# Students see potential for global impact

0 37.5 75 150 225 300 Miles

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by Melanie Hess

Searching for a new career, Ed Robinson had two major criteria, an in-demand industry and fairly analytical work.

Finally finding a job that piqued his interests—geospatial technology—Robinson was faced with one major obstacle. His former career as an elementary school teacher required entirely different skills and certifications, leaving Robinson unqualified for the position he desired.

Aware he had a lot to learn before entering the field, Robinson started researching geospatial information science (GIS) education and stumbled upon the new geospatial program at Collin College, a concentration that saw its first graduates this May.

After learning the U.S. Department of Labor has named GIS as one of the fastest growing specialties and discovering its analytical nature, Robinson jumped right in.

Although the profession had been identified as in demand, colleges were not educating enough students in the industry to go into the jobs they expect to have, creating an ideal market for job seekers.

George Jackson, professor of GIS at Collin College, believes the reason fewer individuals have pursued GIS in the past is due in part to the lack of general understanding of what GIS is.

"It's basically a way of presenting data where location is important," Jackson said.

He gives the following conversation as a basic example:

"A hurricane wiped out a major U.S. city!"

"Which city?"

"Well, that'd be New Orleans."

"How much of it was destroyed?"

"A bunch of it."

"Can you show me on a map?"

"And that's what we do in GIS."

We take that data, and we show them on a map," Jackson said.

Still at the start of his GIS education, Robinson articulates its purpose well.

"It's a marriage of attractive maps and data, so we can make better decisions," Robinson said. "We use maps and data to make decisions for healthcare, for building communities, for developing infrastructure, for strategic planning. You name it, we can be involved with it."

Students a few semesters further along in the program than Robinson comment that they enjoy the applicability of their classroom work to what they will soon be doing in a workplace setting.

An individual just entering the GIS field will likely begin as a GIS intern or technician and then become an analyst.

"This individual will have the



ability to solve problems for government or business or whoever their employer is," Jackson said. "What areas of New Orleans were damaged by the hurricane, and can you rank those areas based on which areas need the most help?"

"That's analysis. I can go look at some information, I can analyze the data and I can present the data."

Several advanced Collin College students had the unique opportunity to experience exactly what this position looks like with the Collin County Government GIS Department last semester.

Two Collin College GIS advisory board members, Tim Nolan and Bret Fenster, allowed select Collin College students to shadow them for a day.

"The day I went to the Collin County GIS was a wonderful day," Akram Amen said.

Amen said there were two parts to his day at Collin County GIS. The first involved a meeting that provided him with a solid understanding of how the analysts schedule their work and how they divide the projects between the cities and the county.

Second, Amen and his classmate worked on a task with Bret Fenster, Collin County GIS analyst and GIS program advisory board member.

"I put them to work on our Historical Asset Inventory, a project driven by the Collin County Historical Commission. Our GIS department contributes by mapping historical sites for display on our interactive map," Fenster said. "We do a lot of paper maps for various departments and we're currently designing paper maps for the next election, but we like to share our interactive map portals with everyone in the county and beyond. We are updating our data constantly."

"The specific job we did that day was Elm Grove Cemetery," Amen said. "We found out there were two different locations. One was correct, and one was not. We worked together to correct the data that caused the error."

It was the first time he was able to



*Akram Amen*

do some real work in GIS and it gave him an opportunity to apply skills he learned in the classroom to real-life scenarios.

Much like working in the industry day in and day out, Jackson said GIS research can also serve as applicable to the everyday life of a city.

"My personal research is about the Dallas urban heat island," Jackson said. "Sitting inside the city center of most cities, where all the tall buildings are, is a heat pocket that never dissipates. The downtown area of most cities is significantly hotter than

the surrounding area, that's called a heat island."

In comparison to other major cities, many people believe Dallas

doesn't have a heat island, Jackson explained. The concrete and asphalt absorb heat and tall buildings create a canyon where the air gets stuck. While

a heat island does exist in Dallas, it is much less severe than in other metropolitan areas.

"We don't have that much here because the city has been aware of the heat island for a long time and looked at the way they space out the buildings so we don't create that urban canyon," Jackson said.

It's these types of geospatial issues Jackson hopes to address with his students, so that when they enter the workforce they are prepared to account for how to set up structures and spacing to create more ideal environments.

Robinson chose the GIS certificate option and plans to immediately enter the workforce. Many other students pursue their associates in GIS as a terminal degree or as a foundation for their bachelor's degree. Either way, the jobs are there, the training is here and it serves a meaningful purpose many people aren't even aware of.

"Whether its malaria clinics in Africa, tracking wildlife across Asia or planning daycare centers in Plano, it all comes down to maps and data," Robinson said. ❖

*Melanie Hess is a public relations associate for Collin College.*